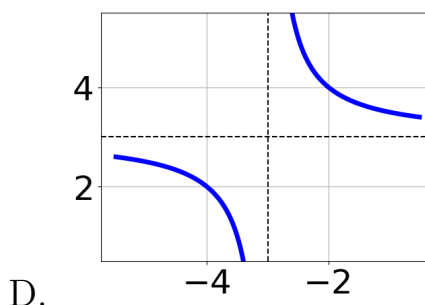
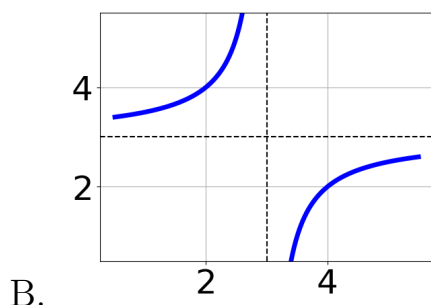
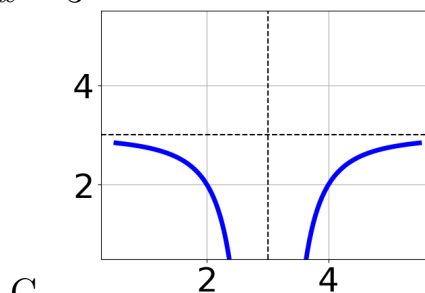
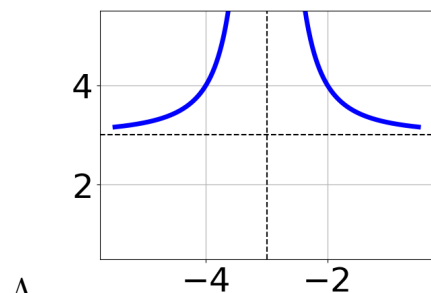


1. Choose the graph of the equation below.

$$f(x) = \frac{-1}{x-3} + 3$$



E. None of the above.

2. Solve the rational equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\frac{98}{-42x + 70} + 1 = \frac{98}{-42x + 70}$$

A.  $x_1 \in [-2.67, 0.33]$  and  $x_2 \in [-0.33, 2.67]$

B.  $x \in [-2.67, 0.33]$

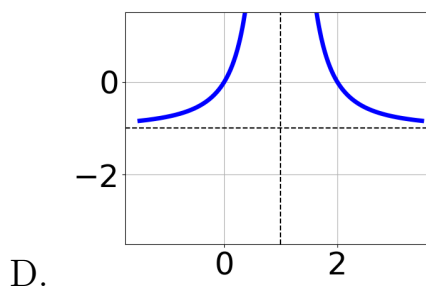
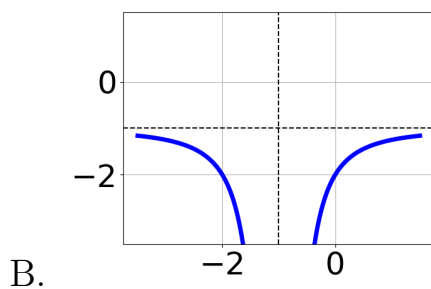
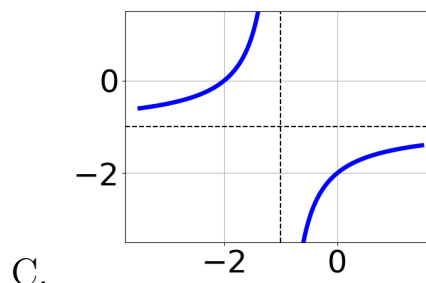
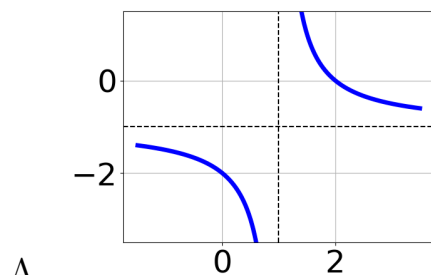
C. All solutions lead to invalid or complex values in the equation.

D.  $x \in [0.67, 2.67]$

E.  $x_1 \in [0.67, 2.67]$  and  $x_2 \in [-0.33, 2.67]$

3. Choose the graph of the equation below.

$$f(x) = \frac{1}{x-1} - 1$$



E. None of the above.

4. Solve the rational equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\frac{3}{-8x + 3} + -4 = \frac{9}{64x - 24}$$

- A. All solutions lead to invalid or complex values in the equation.  
 B.  $x \in [0.25, 2.25]$   
 C.  $x \in [-1.3, -0.2]$   
 D.  $x_1 \in [-1.3, -0.2]$  and  $x_2 \in [0.16, 0.37]$   
 E.  $x_1 \in [0, 0.6]$  and  $x_2 \in [0.49, 0.57]$

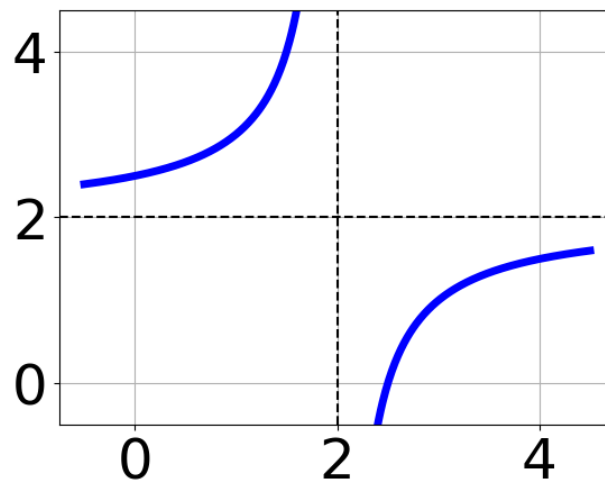
5. Determine the domain of the function below.

$$f(x) = \frac{5}{18x^2 - 33x + 15}$$

- A. All Real numbers except  $x = a$ , where  $a \in [0.65, 0.85]$   
 B. All Real numbers except  $x = a$  and  $x = b$ , where  $a \in [8.93, 9.23]$  and  $b \in [29.76, 30.07]$

- C. All Real numbers.
- D. All Real numbers except  $x = a$ , where  $a \in [8.93, 9.23]$
- E. All Real numbers except  $x = a$  and  $x = b$ , where  $a \in [0.65, 0.85]$  and  $b \in [0.85, 1.05]$

6. Choose the equation of the function graphed below.



- A.  $f(x) = \frac{1}{x-2} + 0$
- B.  $f(x) = \frac{-1}{x+2} + 0$
- C.  $f(x) = \frac{1}{(x-2)^2} + 0$
- D.  $f(x) = \frac{-1}{(x+2)^2} + 0$
- E. None of the above

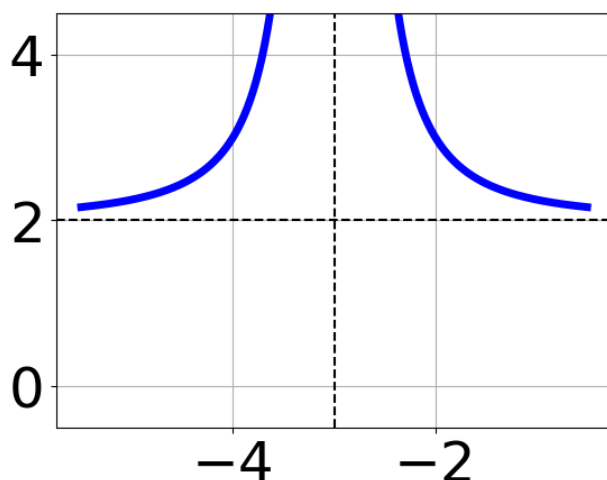
7. Determine the domain of the function below.

$$f(x) = \frac{6}{9x^2 + 9x - 18}$$

- A. All Real numbers.

- B. All Real numbers except  $x = a$  and  $x = b$ , where  $a \in [-2.2, -1.9]$  and  $b \in [0.5, 3.3]$
- C. All Real numbers except  $x = a$ , where  $a \in [-2.2, -1.9]$
- D. All Real numbers except  $x = a$  and  $x = b$ , where  $a \in [-19.1, -16.9]$  and  $b \in [8.3, 10.9]$
- E. All Real numbers except  $x = a$ , where  $a \in [-19.1, -16.9]$

8. Choose the equation of the function graphed below.



- A.  $f(x) = \frac{-1}{x+3} - 5$
- B.  $f(x) = \frac{-1}{(x+3)^2} - 5$
- C.  $f(x) = \frac{1}{x-3} - 5$
- D.  $f(x) = \frac{1}{(x-3)^2} - 5$
- E. None of the above

9. Solve the rational equation below. Then, choose the interval(s) that

the solution(s) belongs to.

$$\frac{6x}{-5x-4} + \frac{-7x^2}{-30x^2-49x-20} = \frac{-2}{6x+5}$$

- A.  $x \in [-1.07, -0.97]$
- B.  $x_1 \in [0.09, 0.72]$  and  $x_2 \in [-1.6, -0.81]$
- C.  $x_1 \in [0.09, 0.72]$  and  $x_2 \in [-0.82, -0.29]$
- D.  $x \in [-0.88, -0.27]$
- E. All solutions lead to invalid or complex values in the equation.

10. Solve the rational equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\frac{2x}{4x+4} + \frac{-6x^2}{-16x^2-40x-24} = \frac{7}{-4x-6}$$

- A.  $x_1 \in [-1.73, -1.62]$  and  $x_2 \in [-1.39, -1.19]$
- B.  $x \in [-1.37, -1.19]$
- C.  $x_1 \in [-1.73, -1.62]$  and  $x_2 \in [-1.17, -0.52]$
- D. All solutions lead to invalid or complex values in the equation.
- E.  $x \in [-1.58, -1.47]$